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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,545	07/22/2003	Kenichi Ishii	8032-1029	4870

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EXAMINER

LAM, DUNG LE

ART UNIT	PAPER NUMBER
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2687

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,545	Applicant(s) ISHII, KENICHI	
	Examiner Dung Lam	Art Unit 2687	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 15-21, 24, 26, 27, 32, 33, 40-51, 72 and 73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 15-21, 24, 26, 27, 32, 33, 40-51, 72 and 73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)–(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The references listed in the Information Disclosure Statement submitted on 4/20/2004, 09/01/2005 and 11/21/2005 have been considered by the examiner (see attached PTO-1449 form).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims **1, 8 and 9** are rejected under 35 U.S.C. 102(b) as being anticipated by **3GPP TS23.271** (Functional Stage 2 description of Location services in UMTS, version 3.8.0).
4. Regarding **claim 1**, **TS123.171** teaches a location system for locating a plurality of mobile terminals, comprising (pages 19-21), a communication terminal for transmitting a location request specifying a target mobile terminal (target UE) and a type of location information (section 5.5.1, page 19);

and a location network (see Fig. 6.1 page 20 and section 6) responsive to said location request from said communication terminal for producing current location information of the target mobile terminal if the type of location information of the received request specifies current location information (see section 8.7.1.1 page 31-33) and transmitting the current location information to said communication terminal (section 8.7.1.3 page 33) and storing the last known location information in a memory as last known location information of the target mobile terminal (section 8.7.2.3 page 33) and copying stored last known location information of the target mobile terminal from the memory if said type of location information specifies last known location information and transmitting the copied information to said communication terminal (section 8.7.2.5.1 - 8.7.2.5.2, page 35).

5. Regarding **claim 8**, **TS123.171** teaches the location system of claim 1, wherein said communication terminal is a client terminal (LCS client, page 8 and 19).

6. Regarding **claim 9**, **TS123.171** teaches the location system of claim 1, wherein said communication terminal is a mobile terminal that represents one of said plurality of mobile terminals (LCS client may reside in the Mobile Station, page 8).

7. Claims **2-7, 10, 15-21, 24, 26, 27, 32, 33, 40-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over **3GPP TS123.171** (Functional Stage 2 description of LCS, version 5.3.0) in view of **Parupudi** (US Pub. No. 2005/0020307).

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8. Regarding **claim 2**, **TS123.171** teaches a location system of claim 1. **TS123.171** further teaches the concept of time-stamp that indicates the age of the location (section 8.7.2 page 34 and p. 20). However, **TS123.171** does not specifically teach that the location network performs a reusability test on the stored last known location information and transmits said last known location information if the reusability test indicates a favorable result and transmits said current location information if the reusability test indicates an unfavorable result. In an analogous art, **Parupudi** teaches the concept of using timestamp to assist the location module in determining whether the location information is stale and should be refreshed (page 11). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention to combine **TS23.271**'s of location system and **Parupudi**'s teaching of having a timestamp on the location to determine if the location information is re-usable or not to increase the accuracy of the location function of the system.

9. With further regard to **claim 3**, **TS123.171** and **Parupudi** teach a location system of claim 2. While they do not explicitly teach said location network performing said reusability test by using a parameter of last known location, **Parupudi** teaches the concept of having a timestamp for the location information and the suggestion of using the timestamp to test whether the location information needs to be updated or refreshed (page 11). Therefore, it would have been obvious for one of ordinary skill in the art at the time of invention to further modified **TS23.271**'s teaching to perform a reusability test on last known location information to provide the best possible location estimation.

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10. Regarding **claim 4, TS123.171 and Parupudi** teach the location system of claim 2, wherein said parameter represents one of age and accuracy of last known location information (page 32, 8.7.1.1 item 4).

11. Regarding **claim 5, TS123.171 and Parupudi** teach the location system of claim 1, wherein said location network maintains privacy profile of the target mobile terminal, uses the privacy profile to perform a privacy check on said location request and transmits said last known location information if the privacy check indicates a favorable result (item 5-7 of page 32).

12. Regarding **claim 6, TS123.171 and Parupudi** teach the location system of claim 5, wherein said location network transmits a notification message to the target mobile terminal according to said privacy profile before transmitting said last known location information to said communication terminal (item 5-6 of page 32).

13. Regarding **claim 7, TS123.171 and Parupudi** teach the location system of claim 1, wherein said location network transmits a verification message to the target mobile terminal according to said privacy profile and transmits said last known location information to the communication terminal when the location system receives a verification report from the target mobile terminal which indicates that the location request is verified by the target mobile terminal (see page 32-33, items 6, 7-12).

14. Regarding **claim 10, TS123.171 and Parupudi** teach the location system of claim 9, wherein said location network (see Fig. 6.1 page 20 and section 6) responsive to said location request from said communication terminal for producing current location information of the target mobile terminal if the type of location information of the

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received request specifies current location information (see section 8.7.1.1 page 31-33) and transmitting the current location information to said communication terminal (section 8.7.1.3 page 33) and storing the last known location information in a memory as last known location information of the target mobile terminal (section 8.7.2.3 page 33) and copying stored last known location information of the target mobile terminal from the memory if said type of location information specifies last known location information and transmitting the copied information to said communication terminal (section 8.7.2.5.1 - 8.7.2.5.2, page 35).

15. Regarding **claim 15**, **TS123.171** teaches the location system of claim 1, wherein said location network comprises, a communication terminal for transmitting a location request specifying a target mobile terminal (target UE) and a type of location information (section 5.5.1, page 19); a gateway (LCS server = GMLC, page 19, section 5.5.2) including receive means for receiving a location request from a communication terminal (section 5.5.1, page 19), said request specifying a target mobile terminal and a type of location information (section 5.5.1, page 19); and a wireless network including: a memory (inherent to store data); inherent control means for receiving the location request from said gateway (section 5.5.2)

and producing current location information of the target mobile terminal if the type of location information of the received request specifies current location information and storing the acquired current location information in said memory as last known location information of the target mobile terminal, and reading the stored last known location information of the target mobile terminal from said memory if said type of location

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information specifies last known location information; and transmit means for transmitting, to said gateway, a copy of the acquired current location information or a copy of the last known location information read from said memory, depending on said type of last known location information (see claim 1 above),

said gateway further including transmit means for repeating said copy of current location information or last known location information to said communication terminal (section 7.4, p.26).

16. Regarding **claim 16**, it is a combination of the limitations from claim 5 and claim 2. Therefore, it is rejected for the same reason as claims 5 and 2.

17. Regarding **claim 17**, it is a combination of the limitations from claim 6 and claim 7. Therefore, it is rejected for the same reason as claims 6 and 7.

18. Regarding **claim 18**, it is a combination of the limitations from claim 6 and claim 7. Therefore, it is rejected for the same reason as claims 6 and 7.

19. Regarding **claim 19, 20, 24, 26 and 27**, it has the same limitations as claim 1 combined with claim 15. Therefore, it is rejected for the same reasons as claims 1 and 15. **TS123.171** further teaches a plurality of wireless networks (Other PLMN, Figure 6.1, page 20) and a register (HLR, p. 31-32), which provides LCs data and routing information for roaming Ues (p.4, p. 26).

20. Regarding **claim 21**, it is a combination of the limitations from claim 2 and claim 5. Therefore, it is rejected for the same reason as claims 2 and 5.

21. Regarding **claim 24, 32 and 33**, TS123.171 teaches the location system of claim

19. **TS123.171** inherently teaches a second gateway (Other PLMN which implies other gateway, Figure 6.1, page 20) which, when visited by said target mobile terminal, inherently operates as a repeater node between said one wireless network and said first gateway for repeating said current location information (in data communication, a gateway is known to act as a bridge in relaying/repeating information between two points).

22. Regarding **claim 40**, it is a location method corresponding to the location system of claim 1. Therefore, it is rejected for the same reasons as claim 1.

23. Regarding **claim 41 and 42**, they are location methods corresponding to the location system of claim 2. Therefore, it is rejected for the same reasons as claim 2.

24. Regarding **claim 43**, it is a location method corresponding to the location system of claims 4 and 5. Therefore, it is rejected for the same reasons as claims 4 and 5.

25. Regarding **claim 44**, it is a location method corresponding to the location system of claims 1, 2 and 3. Therefore, it is rejected for the same reasons as claims 1, 2 and 3.

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26. Regarding **claim 45**, it is a location method corresponding to the location system of claims 5 and 6. Therefore, it is rejected for the same reasons as claims 5 and 6.

27. Regarding **claim 47**, it is a location method corresponding to the location system of claims 4 and 5. Therefore, it is rejected for the same reasons as claims 4 and 5.

28. Regarding **claim 46, 48, 49 and 50**, they are location methods corresponding to the location system of claims 7, 8, 9, and 10 respectively. Therefore, they are rejected for the same reasons as claims 7-10 respectively.

29. Regarding **claim 51**, it is a location method corresponding to the location system of claims 1 and 2. Therefore, it is rejected for the same reasons as claims 1 and 2.

30. Claims **72 and 73** are rejected under 35 U.S.C. 102(b) as being anticipated by **3GPP TS23.271** (Functional Stage 2 description of LCS, version 5.3.0).

31. Regarding **claim 72**, **TS23.271** teaches the location method comprising the steps of: from client terminal, transmitting location request to a gateway for requesting location information target mobile terminal (step 1 of 9.1.1 page. 34); responsive said location request, performing said gateway a first privacy check client terminal privacy profile of the target mobile terminal and transmitting an enquiry message from gateway Register/Home Subscriber Server (HLR/HSS) (step 2 of 9.1.1 page. 34), if (b1) said client terminal verified by said first privacy check, and (b2) said location request contains an indication that known location information of the target mobile terminal may

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be may be used, (b3) said last known location information is reusably maintained in the gateway and (b4) notification to said target mobile terminal is required;

c) responsive said enquiry message, returning from said HLR/HSS a reply message said gateway, containing the identifier Serving General packet radio service support Node/Mobile Services switching Center (SGSN/MSC) said target mobile terminal is currently associated; (step 3, page 35)

d) responsive to said reply message, transmitting from said gateway a request message to said SGSN/MSC; e) responsive to said request message, transmitting from said SGSN/MSC a notification/verification message to said to said target mobile terminal and transmitting to said gateway; and f) responsive said a verification report performing said gateway second privacy check the client terminal with privacy profile the target mobile terminal said verification report indicates terminal verified target mobile terminal transmitting location information of the target mobile terminal client terminal said client terminal verified by the second privacy check (steps 4-5, page 35).

32. Regarding **claim 73**, **TS23.271** teaches the location method comprising the steps of: a) from client terminal, transmitting a location request to a gateway for requesting location information target mobile terminal (step 1 of 9.1.1 page. 34);

b) responsive to said location request, transmitting an enquiry message from said gateway to a Home Location Register/Home Subscriber Server (HLR/HSS) (step 2 of 9.1.1 page. 34);

c) responsive to said enquiry message, returning from said HLR/HSS a reply message said gateway, containing the identifier Serving General packet radio service support Node/Mobile Services switching Center (SGSN/MSC) with which said target mobile terminal is currently associated; (step 3, page 35)

d) responsive to said reply message, retransmitting from said gateway a request message to said SGSN/MSC; e) responsive to said location request from the gateway, performing, at said SGSN/MSC a first privacy check of the client terminal with privacy profile of the target mobile terminal, and transmitting from said SGSN/MSC a notification/verification message to said target mobile terminal, if (e1) said location request contains an indication that last known location information of the target mobile terminal may be used, (e3) said last known location information is reusably maintained in the gateway and (e4) notification to said target mobile terminal is required; f) performing, at said SGSN/MSC, a second privacy check of the client terminal with privacy profile of the target mobile terminal if said client terminal is verified by the target mobile terminal and transmitting location information of the target mobile terminal from the SGSN/MSC to said gateway if said client terminal is verified by the second privacy check; and g) at said gateway, repeating said location information from the SGSN/MSC to said client terminal (steps 4-5, page 35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Lam whose telephone number is (571) 272-6497. The examiner can normally be reached on M - F 9 - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DL


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